PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-259390

(43)Date of publication of application : 24.09.1999

(51)Int.Cl. G06F 13/00
G06F 13/00
G06F 17/24
H04L 12/54
H04L 12/58

(21)Application number : 10-054620

(22)Date of filing : 06.03.1998

(71)Applicant : INKURIMENTO P KK
PIONEER ELECTRON CORP

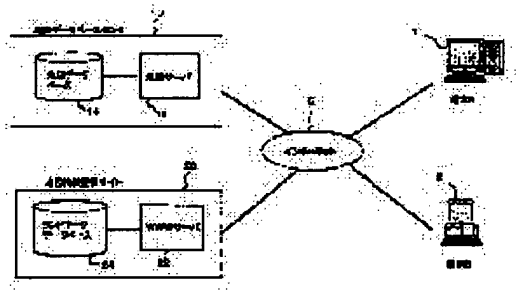
(72)Inventor : NAKANO TOSHIAKI
HAYASHI GIICHI
SEKIGUCHI MASAYO
TAKAHASHI KAZUYUKI
KOIZUMI ISAO
KONO KAZUTSUGU

(54) SYSTEM AND METHOD FOR TRANSMITTING ELECTRONIC MAIL

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a system and a method for transmitting electronic mail with which transmission information containing map information can be easily prepared as mail information and this information can be transmitted as electronic mail.

SOLUTION: The user of a transmitter terminal acquires map image data at the desired spot by connecting the terminal to a map information providing system 20. Next, when handwriting is arbitrarily inputted onto the acquired map image data, the map image data with this handwriting input are prepared as new image data. Further, the user inputs any arbitrary document data. Afterwards, the transmitter terminal transmits the map image data with handwriting input and the document data to the mail server of a recipient as electronic mail information. Thus, the map image data, to which any arbitrary handwiring input is added by the user, can be transmitted as electronic mail together with ordinary document data.



LEGAL STATUS

[Date of request for examination]	18.09.2002
[Date of sending the examiner's decision of rejection]	
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]	
[Date of final disposal for application]	
[Patent number]	
[Date of registration]	
[Number of appeal against examiner's decision of rejection]	
[Date of requesting appeal against examiner's decision of rejection]	
[Date of extinction of right]	

CLAIMS

[Claim(s)]
[Claim 1] In the electronic mail transmitting system by which each transmits an electronic mail to an addressee's mail server including the transmitting person terminal and map system to offer information which were connected to the network A means to connect said transmitting person terminal to said map system to offer information, and to acquire map image data, A means to perform the hand entry force of arbitration on said acquired map image data, and to create map image data with the hand entry force, The electronic mail transmitting system characterized by having a means to input the document data of arbitration, and a means to transmit to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.
[Claim 2] A means for said transmitting person terminal to have a means to acquire the paint program for hand entry force from said map system to offer information through said network, and to create map image data with said hand entry force is an electronic mail transmitting system according to claim 1 characterized by performing the hand entry force using said paint program.
[Claim 3] Said map system to offer information is an electronic mail transmitting system according to claim 1 characterized by having the map database center which is connected to said network and has a map database.
[Claim 4] Said document data are an electronic mail transmitting system according to claim 1 characterized by being a message relevant to the map image data simultaneously transmitted as said electronic mail information.
[Claim 5] Said hand entry force is an electronic mail transmitting system according to claim 1 characterized by being the diagram showing at least one side of the path between the location of the point of the arbitration on said map image data, or the point of arbitration.
[Claim 6] In the approach of transmitting an electronic mail to an addressee's mail server from said transmitting person terminal within the system containing a transmitting person's terminal and map system to offer information by which each was connected to the network The process which connects with said map system to offer information, and acquires map image data, The process which performs the hand entry force of arbitration on said acquired map image data, and creates map image data with the hand entry force, The transmitting approach of the electronic mail characterized by having the process which inputs the document data of arbitration, and the process transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.
[Claim 7] The process which creates map image data with said hand entry force The process which acquires the paint program for hand entry force from said map system to offer information through said network, The transmitting approach of the electronic mail according to claim 6 characterized by using said paint program and having the process which performs the hand entry force on said acquired map image data, and the process which creates the map image data superimposed on the hand entry force by said paint program.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the electronic mail transmitting technique of transmitting e-mail information by the Internet.
[0002]
[Description of the Prior Art] The electronic mail which transmits and receives e-mail information between the terminals of arbitration using current and the Internet has spread widely. In transmission of an electronic mail, the user of one terminal connected to the Internet creates e-mail information, and transmits this to addressing to a mail server of the addressee of e-mail. The mail server saves the received e-mail information at the mail box. The terminal user who is the addressee of e-mail accesses a mail server, checks whether the mail addressed to itself is saved in the mail server, if saved, can download the information and can read the content. Thus, transmission and reception of e-mail information are possible to mutual among two or more terminals through the Internet.
[0003] On the other hand, on the Internet which used Internet Protocol, various information is offered by the WWW (World Wide Web) server from all over the world, and a user can operate the terminal connected to the Internet and can acquire the information on desired by searching now.
[0004] Although the data utility offered through such the Internet exists variously, there is map information retrieval display service as one of them. This is the service which can acquire the map information on desired and can be displayed on a terminal by having a map database and accessing the WWW server connected to the Internet. If a user inputs an address, the name of a place, a name of the station or various facility names, a store name, etc. from a terminal, specifically, the location and the map of the circumference of it will be displayed on a terminal as image information. Therefore, a user can recognize easily where the target station, a facility, etc. are with reference to the displayed map information.
[0005] Transmission of the map information by the electronic mail can be considered to one of the effective utilization applications of such map information. Namely, it transmits to a desired phase hand by E-mail by making into an electronic mail map information displayed as a result of retrieval of a certain user. A transmitting partner opens this mail, displays on a terminal the map information included in it, and checks the content. For example, by transmitting the map information around the circumference of a house, or a queuing location to a phase hand, the display of a map enables geographical information to transmit to accuracy easily.
[0006]
[Problem(s) to be Solved by the Invention] However, even if it transmits only map information, as for the addressee of the mail, it may be unknown what the received map information means, and he may be unable to tell a phase hand exact information easily. Therefore, information about a message etc. may have to be separately exchanged with an electronic mail.
[0007] Then, in order to cancel such inconvenience, the transmitting-side user made the memory of the terminal of end self memorize the map information acquired by map information retrieval display service, created the message to transmit to the other party with the application for document preparation as an e-mail document, attached the map information beforehand memorized in this e-mail document, and had transmitted as an electronic mail.
[0008] However, it is necessary to perform the editing task of being as attaching map information **** [and], in a terminal, and there is a fault that the e-mail information creation activity by the side of a transmitting person is dramatically complicated, and becomes what requires time amount, by such electronic mail transmitting approach.
[switching an input-process screen] Moreover, even when map information and a message are transmitted such, on map information, an addressee needs to look for the destination and is still unclear in many cases.
[0009] This invention is made in view of the above point, creates transfer information including map information as e-

mail information in a mode from which the destination on a map etc. becomes clearer, and makes it a technical problem to offer the electronic mail system which makes this ready-for-sending ability as an electronic mail, and its transmitting approach.

[0010]

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, invention according to claim 1 In the electronic mail transmitting system by which each transmits an electronic mail to an addressee's mail server including the transmitting person terminal and map system to offer information which were connected to the network A means to connect said transmitting person terminal to said map system to offer information, and to acquire map image data, A means to perform the hand entry force of arbitration on said acquired map image data, and to create map image data with the hand entry force, It constitutes so that it may have a means to input the document data of arbitration, and a means to transmit to said addressee's mail address by making map image data and said document data with said hand entry force into electronic mail information.

[0011] According to the system constituted as mentioned above, the user of a transmitting person terminal connects with said map system to offer information, and acquires the map image data of a desired point. next, said acquired map image data top -- the hand entry force of arbitration -- if it carries out, map image data with this hand entry force will be created as new image data. Furthermore, a user inputs the document data of arbitration. Then, a transmitting person terminal is transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.

[0012] A means for invention according to claim 2 to have a means by which said transmitting person terminal acquires the paint program for hand entry force from said map system to offer information through said network, in an electronic mail transmitting system according to claim 1, and to create map image data with said hand entry force is constituted so that the hand entry force may be performed using said paint program. Thereby, the hand entry force activity in a transmitting person terminal is done by the program acquired from the map system to offer information.

[0013] In an electronic mail transmitting system according to claim 1, it connects with said network, and invention according to claim 3 constitutes said map system to offer information so that it may have the map database center which has a map database. Thereby, a map system to offer information accesses a map database, and acquires the map information on arbitration.

[0014] Invention according to claim 4 is a message relevant to the map image data to which said document data are simultaneously transmitted as said electronic mail information in an electronic mail transmitting system according to claim 1. A document can also create the information relevant to a map image and the hand entry force by this, and it can transmit.

[0015] Invention according to claim 5 is a diagram in which said hand entry force shows at least one side of the path between the location of the point of the arbitration on said map image data, or the point of arbitration in an electronic mail transmitting system according to claim 1. Thereby, a destination, a path, etc. on a map image can be more clearly told to a transmitting partner.

[0016] In the approach of transmitting an electronic mail to an addressee's mail server from said transmitting person terminal within the system by which invention according to claim 6 contains the transmitting person terminal and map system to offer information by which each was connected to the network The process which connects with said map system to offer information, and acquires map image data, The process which performs the hand entry force of arbitration on said acquired map image data, and creates map image data with the hand entry force, It constitutes so that it may have the process which inputs the document data of arbitration, and the process transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.

[0017] According to the transmitting approach of the electronic mail constituted as mentioned above, the user of a transmitting person terminal connects with said map system to offer information, and acquires the map image data of a desired point. next, said acquired map image data top -- the hand entry force of arbitration -- if it carries out, map image data with this hand entry force will be created as new image data. Furthermore, a user inputs the document data of arbitration. Then, a transmitting person terminal is transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.

[0018] The process at which invention according to claim 7 creates map image data with said hand entry force in the transmitting approach of an electronic mail according to claim 6 The process which acquires the paint program for hand entry force from said map system to offer information through said network, Said paint program is used and it has the process which performs the hand entry force on said acquired map image data, and the process which creates the map image data superimposed on the hand entry force by said paint program. Thereby, the hand entry force activity in a transmitting person terminal is done by the program acquired from the map system to offer information.

[0019]
[Embodiment of the Invention] This invention is characterized by making into ready-for-sending ability e-mail information which a transmitting person overwrites an alphabetic character, a notation, etc. freely, and includes the map information on the map information acquired by map communications service as an electronic mail. Hereafter, the gestalt of suitable operation of this invention is explained with reference to a drawing.
[0020] [1] The rough configuration of the electronic mail system built over the operation gestalt of this invention at system configuration drawing 1 is shown. In drawing 1 , the map database center 10 and the map information offer site 20 are connected to the Internet 5. Furthermore, Terminal A and Terminal B are connected to the Internet 5.
[0021] The map database center 10 is a center for carrying out map retrieval display service on the Internet, and is equipped with the map server 12 and the map database 14. The map database 14 contains the image data of the information on the positional information on a map (coordinate information), for example, the LAT, and LONG, and the map information corresponding to the positional information. The image data of map information is constituted by two or more layered structures according to the contraction scale. That is, like drawing in whole Japan, and drawing of all-prefectures level, the image data of two or more contraction scales is prepared, and the map file name which is alike, respectively and specifies the image data is attached. Contraction scale information and a map file are matched.
[0022] The map server 12 searches and acquires the image data of map information which corresponds according to the assignment from a user terminal, directions, etc. from the map database 14, and transmits to a user terminal through the Internet 5. Moreover, the map server 12 also performs retrieval of map information, and transmission according to the demand from a WWW server.
[0023] The map information offer site 20 is a WWW site. WWW is a broader-based information system on the Internet which offers multimedia information, such as text, image information, and speech information, using a hypertext. A WWW server is a server on the Internet linked by WWW, and calls a WWW site the site which gives its service by WWW. The map information offer site 20 is equipped with the WWW server 22 and the landmark database 24.
[0024] The landmark database 24 has memorized the data to which responses with those positional information are indicated to be a certain specific address, a name of the station, and landmarks (a facility, an amusement center, an amusement park, store, etc.). Therefore, the WWW server 22 can specify the address corresponding to it, a name of the station, and a landmark from specific positional information by accessing the landmark database 24. Moreover, the positional information corresponding to reverse is also acquirable from a specific address, a name of the station, a landmark name, etc.
[0025] Terminals A and B are user terminals and can receive service of WWW by using the application program called a WWW browser. In the example of drawing 1 , Terminals A and B are connected to the map information offer site 20 using a WWW browser, and it becomes possible by perusing the homepage to receive offer service of map information.

[0026] [2] Explain the basic actuation for basic actuation of map information offer, next offer of map information with reference to drawing 2 thru/or 4. Drawing 2 is a flow chart which shows offer actuation of map information, and drawing 3 **** drawing 4 is the example of the map display screen in each phase. Hereafter, the user A of Terminal A connects with a map information offer site, and it explains taking the case of the case where map information is acquired.
[0027] First, User A uses the WWW browser of Terminal A, and specifies URL (Uniform Resource Locator) of a map information offer site (step S2). URL is address information which specifies the specific link place on WWW. This connects Terminal A to the WWW server 22 of the map information offer site 20 through the Internet 5.
[0028] Answering this, the WWW server 22 sends the HTML (Hypertext Markup Language) text of the homepage of a map information offer site to Terminal A. A HTML text is the text file described in the language called HTML, and the information on preservation places, such as associated image information and speech information, can be included. The WWW browser of Terminal A displays this HTML text (step S4).
[0029] The example of the initial screen of the homepage concerned displayed on drawing 3 in this way is shown. In drawing 3 , there is a map display 30 in the upper part of the display screen, and a map image is displayed there. Moreover, the contraction scale specification part 32 is immediately under the map display 30, and this shows the contraction scale (scale) of the map currently displayed in the map display 30. Each carbon button in the contraction scale specification part 32 (this example 11 steps) supports a different contraction scale. In the example of drawing 3 , the display of a map is made by the largest (close to a left-hand side Japanese map mark) contraction scale. If the conservative (close to "street") carbon button in the contraction scale specification part 32 is clicked to expand the displayed map image, the small map image of a contraction scale will be displayed.
[0030] The scrolling section 34 is displayed on the left-hand side of the contraction scale specification part 32. The scrolling section 34 is used to display the periphery of the map by which it is indicated by current, and the arrow head

turned in the eight directions centering on the current display position is displayed. For example, a user's click of the upward arrow head in the scrolling section 34 displays the map of the periphery of the location by which it is indicated by current located immediately north.
[0031] On the bottom of the contraction scale specification part 32, the input column 36 for specifying or inputting a location searching is displayed. The user as whom the carbon button of "an address list", "a station list", and "a landmark list" is displayed, and the candidate list of an address, a name of the station, and landmark names is displayed by clicking these can display the map image of the location on the left-hand side of the input column 36 by choosing a desired candidate out of them. Moreover, the input box of an address, a name of the station, and a landmark name is displayed on the right-hand side of the input column 36, and a user can do the direct input of a desired address, the name of the station, etc. using a keyboard. For example, if a user inputs the "Kamata station" in the name-of-the-station input box of the input column 36, as shown in drawing 4 , the map image centering on the Kamata station will be displayed in the map display 30.
[0032] Various special function carbon buttons are displayed on the right-hand side of the input column 36. Although the 2nd mail processing carbon button 38 will be used from a top when transmitting the electronic mail with map information by this invention, about the detail of the transmitting processing, it mentions later.
[0033] Thus, where a homepage is displayed, a user specifies the destination which you want to display and inputs. This assignment may be performed by specifying a candidate from the list on the left-hand side of the input column 36, and may be performed by carrying out direct typing of the address etc. in an input box. In this way, the specified destination information is sent to the WWW server 22 through the Internet 5 from Terminal A (step S6). The contraction scale information by which can come, simultaneously current selection is made is also sent to the WWW server 22.
[0034] The WWW server 22 acquires the positional information (coordinate information) corresponding to the destination concerned for this information with reference to reception and the landmark database 24, creates a HTML text including this positional information, and transmits to Terminal A (step S8). Server Name (namely, map server 12) which the terminal A which received it further should access, the map file name chosen according to the contraction scale by which current selection is made, the sentence which should be displayed on Terminal A are contained in this HTML text.
[0035] The WWW browser of Terminal A displays the sentence contained in reception and it in this HTML text. Moreover, information, such as a map file name, positional information, size information, and contraction scale information, is sent to the map server 12 described in the HTML text concerned (step S10).
[0036] The map server 12 accesses the map database 14, acquires the image data corresponding to the range determined using size information focusing on positional information among the image data of the map file specified by contraction scale information and positional information, and transmits to Terminal A by making this into map image data (GIF data) (step S12).
[0037] Terminal A displays the map image data transmitted from the map server 12 on the display part specified in the HTML text to which it was previously transmitted from the WWW server (step S14). In this way, the map image data of the destination specified by a user is displayed in the map display 30 of Terminal A. In addition, when the destination is changed by the re-assignment to a user's input column 36, and reinput, based on the positional information after changing step S6 thru/or processing of S14 etc., a map display is updated repeatedly.
[0038] Moreover, where a map image is displayed, also when there are modification of a contraction scale, modification of a display position, etc., processing transmits return, the positional information after modification, contraction scale information, etc. to step S6 to the WWW server 22. Henceforth, the WWW server 22, the map server 12, and Terminal A perform same processing based on the information after modification, and change a map display.
[0039] For example, when a user operates the contraction scale specification part 32 and contraction scale information is changed, the range of the map image data which the map file which the map server 12 should access is changed, or is transmitted to Terminal A among the same map files is changed. On the other hand, if a user clicks the location which is interested on the map displayed in the map display 30, the positional information of the location will be transmitted and the map server 12 will transmit the map image data centering on the location to Terminal A. Consequently, the map in the map display 30 is changed into a display centering on the location which the user clicked.
[0040] In addition, in the above-mentioned explanation, although the map server 12 specified the map file directly by the file name, the map file of the map server 12 may be made to be built according to original administrative information. In that case, it replaces with specifying a map file name directly, and a map file is accessed using CGI (Common Gateway Interface) which achieves an interface with the program which moves on a WWW server and a server. For example, at step S10, the CGI name for a map display is sent to the map server 12.
[0041] [3] Explain the electronic mail transmitting processing concerning this invention with reference to electronic

mail transmitting processing next drawing 5 thru/or 7. Drawing 5 is a flow chart which shows electronic mail transmitting processing. Moreover, drawing 6 and 7 show the example of the e-mail creation screen displayed on a terminal in electronic mail transmitting processing.
[0042] Hereafter, the user A of Terminal A explains to the user B of Terminal B the processing which transmits the electronic mail with map information concerning this invention. Now, User A shall have connected with a map information offer site. Here, User A displays first a map image to transmit to User B with the procedure described previously on Terminal A (step S20). This is performed by the approach explained with reference to the flow chart of drawing 2 . Namely, in the page of the map information offer site displayed on Terminal A, the map information on a desired location is displayed on the map display 30 by inputting an address, a name of the station, etc. Moreover, if required, a suitable contraction scale will be chosen by clicking the carbon button in the contraction scale specification part 32.
[0043] Next, User A clicks the e-mail processing carbon button 38 (step S22). Then, Terminal A sends the positional information (center position of a display), size information, and contraction scale information on the map image by which it is indicated by current to the WWW server 22 which is the link place URL of the HTML text concerned (step S24). The WWW server 22 sends this data to the map server 12 (step S26). With reference to the map database 14, the map server 12 chooses a map file based on contraction scale information, and acquires the map image of the range determined using positional information and size information. And it is sent to the WWW server 22, using this map image as GIF data (step S28). The WWW server 22 attaches a file name (for example, it considers as "Image C".), and saves this map image data.
[0044] Next, the WWW server 22 creates a HTML text including description of the name of the paint program (JAVA applet) used for the file name "image C" of the image data, positional information, contraction scale information, and a list at Terminal A for the hand entry force, and transmits this to Terminal A (step S30).
[0045] Terminal A reads reception and its content for this HTML text transmitted from the WWW server 22. Moreover, the program of the name described there is required of the WWW server 22, and the program concerned is downloaded (step S32).
[0046] Next, Terminal A acquires the file name of map image data, positional information, contraction scale information, etc. from a HTML text, and acquires and displays the map image file from a WWW server. Moreover, the downloaded paint program is started. Consequently, the e-mail creation screen 40 shown on Terminal A at drawing 6 appears (step S34).
[0047] The destination input box 46, the subject name input box 48, and the message input box 50 are expressed on the right-hand side as the e-mail creation screen 40. This is the same as that of the usual e-mail software wear. Therefore, User A inputs a transmitting partner's mail address, a subject name, and a message in these input boxes using a keyboard.
[0048] In addition, in the e-mail creation screen 40, the map image determined previously is displayed in the map display 42. Thereby, User A can check the map image transmitted to a phase hand with an electronic mail in preparation.
[0049] The hand entry force tool 44 is displayed on the bottom of the map display 42. One big description of this invention is that the hand entry force of arbitration is made on the map image transmitted. That is, it not only says that a map image is attached to an electronic mail and it can only transmit to it, but an e-mail transmitting person performs the hand entry force of arbitration on the map image, and it can transmit the map image with which it was superimposed on such hand entry force by E-mail.
[0050] User A does an e-mail creation activity on the e-mail creation screen 40 (step S34). It is assumed that Now A, for example, a user, transmits the electronic mail about queuing with User B. In this case, User A inputs User's B mail address in the destination input box 46, and inputs a subject name and a message into the subject name input box 48 and the message input box 50, respectively. For example, a subject name is made into "3/3 of queuing", and it waits by "3/3 in the message column, and is waiting with OO hamburger of JR Kamata station west entrance at 7:00 p.m. See a map. " is inputted.
[0051] Next, User A uses the hand entry force tool 44, and performs the hand entry force on the map image displayed in the map display 42. That is, as shown in drawing 7 , the route from JR Kamata station to OO hamburger is surrounded by the line, a bond and OO hamburger are surrounded by the line, and it is shown. If the hand entry force is completed, User A will click the transmitting carbon button 52. Thereby, the e-mail document and map information which were created are decided. In addition, the display on Terminal A returns to the Maine screen shown in drawing 4 by clicking a reset button 52 to stop transmission of the case where he wants to respecify a map image, or mail.
[0052] If the transmitting carbon button 52 is pushed, the paint program within Terminal A will be changed into the image data of a GIF format of the map image with which User's A hand entry force was applied. Terminal A transmits

data, such as changed map image data, a phase hand mail address inputted into the list, a subject name, and a message, to a WWW server 22 (step S36). The WWW server 22 saves the map image data which received, and sends such e-mail information to a phase hand mail address (step S38).
[0053] User B receives and expresses this mail as Terminal B. The map image data (image in the map display 42 of drawing 7) superimposed on User's A hand entry force is attached to this mail, and User B can see that map image with a message. In this way, a map image including the hand entry force is transmitted as an electronic mail.
[0054] With the above-mentioned operation gestalt, the paint program for an e-mail transmitting person to perform the hand entry force on a map image is downloaded from the WWW server to an e-mail transmitting person's terminal as a JAVA applet. Instead, it is also possible to constitute so that data-ization of the map image after the hand entry force and the hand entry force may be performed using the drawing software beforehand prepared in each terminal. The reason for having used the JAVA applet in this operation gestalt is based on the problem of that the drawing software which has the suitable compatibility for each terminal does not necessarily exist, and a security side etc.
[0055] Thus, according to this invention, the map image which applied a transmitting person's hand entry force can be transmitted to a phase hand as an electronic mail with the usual message etc. Therefore, based on map information, it becomes possible to tell against easy more exact information.
[0056]
[Effect of the Invention] As explained above, according to invention according to claim 1 or 6, a user can transmit the map image data which applied the hand entry force of arbitration as an electronic mail with the usual document data. Therefore, an e-mail addressee can receive the map image information to which the hand entry force was carried out with the document with e-mail, and can tell a queuing location etc. to easy and accuracy.
[0057] Since the hand entry force activity in a transmitting person terminal is done by the paint program acquired from the map system to offer information according to invention according to claim 2 or 7, there is no need of preparing a special paint program in a transmitting person terminal. Moreover, since the paint program which the system use person concerned uses can be unified, the error of data processing with the hand entry force in each terminal resulting from the incompatibility of a paint program etc. can be reduced.
[0058] According to invention according to claim 3, renewal of a map database etc. can be managed independently of map information offer processing, and a system management is simplified.
[0059] According to invention according to claim 4, a document can also create the information relevant to a map image and the hand entry force, and it can transmit. Therefore, the content which should be transmitted can be transmitted more to a partner at accuracy.
[0060] According to invention according to claim 5, a destination, a path, etc. on a map image can be told more clearly.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

TECHNICAL FIELD

[Field of the Invention] This invention relates to the electronic mail transmitting technique of transmitting e-mail information by the Internet.

[Translation done.]

PRIOR ART

[Description of the Prior Art] The electronic mail which transmits and receives e-mail information between the terminals of arbitration using current and the Internet has spread widely. In transmission of an electronic mail, the user of one terminal connected to the Internet creates e-mail information, and transmits this to addressing to a mail server of the addressee of e-mail. The mail server saves the received e-mail information at the mail box. The terminal user who is the addressee of e-mail accesses a mail server, checks whether the mail addressed to itself is saved in the mail server, if saved, can download the information and can read the content. Thus, transmission and reception of e-mail information are possible to mutual among two or more terminals through the Internet.

[0003] On the other hand, on the Internet which used Internet Protocol, various information is offered by the WWW (World Wide Web) server from all over the world, and a user can operate the terminal connected to the Internet and can acquire the information on desired by searching now.

[0004] Although the data utility offered through such the Internet exists variously, there is map information retrieval display service as one of them. This is the service which can acquire the map information on desired and can be displayed on a terminal by having a map database and accessing the WWW server connected to the Internet. If a user inputs an address, the name of a place, a name of the station or various facility names, a store name, etc. from a terminal, specifically, the location and the map of the circumference of it will be displayed on a terminal as image information. Therefore, a user can recognize easily where the target station, a facility, etc. are with reference to the displayed map information.

[0005] Transmission of the map information by the electronic mail can be considered to one of the effective utilization applications of such map information. Namely, it transmits to a desired phase hand by E-mail by making into an electronic mail map information displayed as a result of retrieval of a certain user. A transmitting partner opens this mail, displays on a terminal the map information included in it, and checks the content. For example, by transmitting the map information around the circumference of a house, or a queuing location to a phase hand, the display of a map enables geographical information to transmit to accuracy easily.

[Translation done.]

EFFECT OF THE INVENTION

[Effect of the Invention] As explained above, according to invention according to claim 1 or 6, a user can transmit the map image data which applied the hand entry force of arbitration as an electronic mail with the usual document data. Therefore, an e-mail addressee can receive the map image information to which the hand entry force was carried out with the document with e-mail, and can tell a queuing location etc. to easy and accuracy.

[0057] Since the hand entry force activity in a transmitting person terminal is done by the paint program acquired from the map system to offer information according to invention according to claim 2 or 7, there is no need of preparing a special paint program in a transmitting person terminal. Moreover, since the paint program which the system use person concerned uses can be unified, the error of data processing with the hand entry force in each terminal resulting from the incompatibility of a paint program etc. can be reduced.

[0058] According to invention according to claim 3, renewal of a map database etc. can be managed independently of map information offer processing, and a system management is simplified.

[0059] According to invention according to claim 4, a document can also create the information relevant to a map image and the hand entry force, and it can transmit. Therefore, the content which should be transmitted can be transmitted more to a partner at accuracy.

[0060] According to invention according to claim 5, a destination, a path, etc. on a map image can be told more clearly.

[Translation done.]

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, even if it transmits only map information, as for the addressee of the mail, it may be unknown what the received map information means, and he may be unable to tell a phase hand exact information easily. Therefore, information about a message etc. may have to be separately exchanged with an electronic mail.

[0007] Then, in order to cancel such inconvenience, the transmitting-side user made the memory of the terminal of end self memorize the map information acquired by map information retrieval display service, created the message to transmit to the other party with the application for document preparation as an e-mail document, attached the map information beforehand memorized in this e-mail document, and had transmitted as an electronic mail.

[0008] However, it is necessary to perform the editing task of being as attaching map information **** [and], in a terminal, and there is a fault that the e-mail information creation activity by the side of a transmitting person is dramatically complicated, and becomes what requires time amount, by such electronic mail transmitting approach. [switching an input-process screen] Moreover, even when map information and a message are transmitted such, on map information, an addressee needs to look for the destination and is still unclear in many cases.

[0009] This invention is made in view of the above point, creates transfer information including map information as e-mail information in a mode from which the destination on a map etc. becomes clearer, and makes it a technical problem to offer the electronic mail system which makes this ready-for-sending ability as an electronic mail, and its transmitting approach.

[Translation done.]

MEANS

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, invention according to claim 1 In the electronic mail transmitting system by which each transmits an electronic mail to an addressee's mail server including the transmitting person terminal and map system to offer information which were connected to the network A means to connect said transmitting person terminal to said map system to offer information, and to acquire map image data, A means to perform the hand entry force of arbitration on said acquired map image data, and to create map image data with the hand entry force, It constitutes so that it may have a means to input the document data of arbitration, and a means to transmit to said addressee's mail address by making map image data and said document data with said hand entry force into electronic mail information.

[0011] According to the system constituted as mentioned above, the user of a transmitting person terminal connects with said map system to offer information, and acquires the map image data of a desired point. next, said acquired map image data top -- the hand entry force of arbitration -- if it carries out, map image data with this hand entry force will be created as new image data. Furthermore, a user inputs the document data of arbitration. Then, a transmitting person terminal is transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.

[0012] A means for invention according to claim 2 to have a means by which said transmitting person terminal acquires the paint program for hand entry force from said map system to offer information through said network, in an electronic mail transmitting system according to claim 1, and to create map image data with said hand entry force is constituted so that the hand entry force may be performed using said paint program. Thereby, the hand entry force activity in a transmitting person terminal is done by the program acquired from the map system to offer information.

[0013] In an electronic mail transmitting system according to claim 1, it connects with said network, and invention according to claim 3 constitutes said map system to offer information so that it may have the map database center which has a map database. Thereby, a map system to offer information accesses a map database, and acquires the map information on arbitration.

[0014] Invention according to claim 4 is a message relevant to the map image data to which said document data are simultaneously transmitted as said electronic mail information in an electronic mail transmitting system according to claim 1. A document can also create the information relevant to a map image and the hand entry force by this, and it can transmit.

[0015] Invention according to claim 5 is a diagram in which said hand entry force shows at least one side of the path between the location of the point of the arbitration on said map image data, or the point of arbitration in an electronic mail transmitting system according to claim 1. Thereby, a destination, a path, etc. on a map image can be more clearly told to a transmitting partner.

[0016] In the approach of transmitting an electronic mail to an addressee's mail server from said transmitting person terminal within the system by which invention according to claim 6 contains the transmitting person terminal and map system to offer information by which each was connected to the network The process which connects with said map system to offer information, and acquires map image data, The process which performs the hand entry force of arbitration on said acquired map image data, and creates map image data with the hand entry force, It constitutes so that it may have the process which inputs the document data of arbitration, and the process transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.

[0017] According to the transmitting approach of the electronic mail constituted as mentioned above, the user of a transmitting person terminal connects with said map system to offer information, and acquires the map image data of a desired point. next, said acquired map image data top -- the hand entry force of arbitration -- if it carries out, map image data with this hand entry force will be created as new image data. Furthermore, a user inputs the document data of

arbitration. Then, a transmitting person terminal is transmitted to said addressee's mail server by making map image data and said document data with said hand entry force into electronic mail information.
[0018] The process at which invention according to claim 7 creates map image data with said hand entry force in the transmitting approach of an electronic mail according to claim 6 The process which acquires the paint program for hand entry force from said map system to offer information through said network, Said paint program is used and it has the process which performs the hand entry force on said acquired map image data, and the process which creates the map image data superimposed on the hand entry force by said paint program. Thereby, the hand entry force activity in a transmitting person terminal is done by the program acquired from the map system to offer information.
[0019]
[Embodiment of the Invention] This invention is characterized by making into ready-for-sending ability e-mail information which a transmitting person overwrites an alphabetic character, a notation, etc. freely, and includes the map information on the map information acquired by map communications service as an electronic mail. Hereafter, the gestalt of suitable operation of this invention is explained with reference to a drawing.
[0020] [1] The rough configuration of the electronic mail system built over the operation gestalt of this invention at system configuration drawing 1 is shown. In drawing 1 , the map database center 10 and the map information offer site 20 are connected to the Internet 5. Furthermore, Terminal A and Terminal B are connected to the Internet 5.
[0021] The map database center 10 is a center for carrying out map retrieval display service on the Internet, and is equipped with the map server 12 and the map database 14. The map database 14 contains the image data of the information on the positional information on a map (coordinate information), for example, the LAT, and LONG, and the map information corresponding to the positional information. The image data of map information is constituted by two or more layered structures according to the contraction scale. That is, like drawing in whole Japan, and drawing of all-prefectures level, the image data of two or more contraction scales is prepared, and the map file name which is alike, respectively and specifies the image data is attached. Contraction scale information and a map file are matched.
[0022] The map server 12 searches and acquires the image data of map information which corresponds according to the assignment from a user terminal, directions, etc. from the map database 14, and transmits to a user terminal through the Internet 5. Moreover, the map server 12 also performs retrieval of map information, and transmission according to the demand from a WWW server.
[0023] The map information offer site 20 is a WWW site. WWW is a broader-based information system on the Internet which offers multimedia information, such as text, image information, and speech information, using a hypertext. A WWW server is a server on the Internet linked by WWW, and calls a WWW site the site which gives its service by WWW. The map information offer site 20 is equipped with the WWW server 22 and the landmark database 24.
[0024] The landmark database 24 has memorized the data to which responses with those positional information are indicated to be a certain specific address, a name of the station, and landmarks (a facility, an amusement center, an amusement park, store, etc.). Therefore, the WWW server 22 can specify the address corresponding to it, a name of the station, and a landmark from specific positional information by accessing the landmark database 24. Moreover, the positional information corresponding to reverse is also acquirable from a specific address, a name of the station, a landmark name, etc.
[0025] Terminals A and B are user terminals and can receive service of WWW by using the application program called a WWW browser. In the example of drawing 1 , Terminals A and B are connected to the map information offer site 20 using a WWW browser, and it becomes possible by perusing the homepage to receive offer service of map information.

[0026] [2] Explain the basic actuation for basic actuation of map information offer, next offer of map information with reference to drawing 2 thru/or 4. Drawing 2 is a flow chart which shows offer actuation of map information, and drawing 3 **** drawing 4 is the example of the map display screen in each phase. Hereafter, the user A of Terminal A connects with a map information offer site, and it explains taking the case of the case where map information is acquired.
[0027] First, User A uses the WWW browser of Terminal A, and specifies URL (Uniform Resource Locator) of a map information offer site (step S2). URL is address information which specifies the specific link place on WWW. This connects Terminal A to the WWW server 22 of the map information offer site 20 through the Internet 5.
[0028] Answering this, the WWW server 22 sends the HTML (Hypertext Markup Language) text of the homepage of a map information offer site to Terminal A. A HTML text is the text file described in the language called HTML, and the information on preservation places, such as associated image information and speech information, can be included. The WWW browser of Terminal A displays this HTML text (step S4).
[0029] The example of the initial screen of the homepage concerned displayed on drawing 3 in this way is shown. In drawing 3 , there is a map display 30 in the upper part of the display screen, and a map image is displayed there.

Moreover, the contraction scale specification part 32 is immediately under the map display 30, and this shows the contraction scale (scale) of the map currently displayed in the map display 30. Each carbon button in the contraction scale specification part 32 (this example 11 steps) supports a different contraction scale. In the example of drawing 3 , the display of a map is made by the largest (close to a left-hand side Japanese map mark) contraction scale. If the conservative (close to "street") carbon button in the contraction scale specification part 32 is clicked to expand the displayed map image, the small map image of a contraction scale will be displayed.

[0030] The scrolling section 34 is displayed on the left-hand side of the contraction scale specification part 32. The scrolling section 34 is used to display the periphery of the map by which it is indicated by current, and the arrow head turned in the eight directions centering on the current display position is displayed. For example, a user's click of the upward arrow head in the scrolling section 34 displays the map of the periphery of the location by which it is indicated by current located immediately north.

[0031] On the bottom of the contraction scale specification part 32, the input column 36 for specifying or inputting a location searching is displayed. The user as whom the carbon button of "an address list", "a station list", and "a landmark list" is displayed, and the candidate list of an address, a name of the station, and landmark names is displayed by clicking these can display the map image of the location on the left-hand side of the input column 36 by choosing a desired candidate out of them. Moreover, the input box of an address, a name of the station, and a landmark name is displayed on the right-hand side of the input column 36, and a user can do the direct input of a desired address, the name of the station, etc. using a keyboard. For example, if a user inputs the "Kamata station" in the name-of-the-station input box of the input column 36, as shown in drawing 4 , the map image centering on the Kamata station will be displayed in the map display 30.

[0032] Various special function carbon buttons are displayed on the right-hand side of the input column 36. Although the 2nd mail processing carbon button 38 will be used from a top when transmitting the electronic mail with map information by this invention, about the detail of the transmitting processing, it mentions later.

[0033] Thus, where a homepage is displayed, a user specifies the destination which you want to display and inputs. This assignment may be performed by specifying a candidate from the list on the left-hand side of the input column 36, and may be performed by carrying out direct typing of the address etc. in an input box. In this way, the specified destination information is sent to the WWW server 22 through the Internet 5 from Terminal A (step S6). The contraction scale information by which can come, simultaneously current selection is made is also sent to the WWW server 22.

[0034] The WWW server 22 acquires the positional information (coordinate information) corresponding to the destination concerned for this information with reference to reception and the landmark database 24, creates a HTML text including this positional information, and transmits to Terminal A (step S8). Server Name (namely, map server 12) which the terminal A which received it further should access, the map file name chosen according to the contraction scale by which current selection is made, the sentence which should be displayed on Terminal A are contained in this HTML text.

[0035] The WWW browser of Terminal A displays the sentence contained in reception and it in this HTML text. Moreover, information, such as a map file name, positional information, size information, and contraction scale information, is sent to the map server 12 described in the HTML text concerned (step S10).

[0036] The map server 12 accesses the map database 14, acquires the image data corresponding to the range determined using size information focusing on positional information among the image data of the map file specified by contraction scale information and positional information, and transmits to Terminal A by making this into map image data (GIF data) (step S12).

[0037] Terminal A displays the map image data transmitted from the map server 12 on the display part specified in the HTML text to which it was previously transmitted from the WWW server (step S14). In this way, the map image data of the destination specified by a user is displayed in the map display 30 of Terminal A. In addition, when the destination is changed by the re-assignment to a user's input column 36, and reinput, based on the positional information after changing step S6 thru/or processing of S14 etc., a map display is updated repeatedly.

[0038] Moreover, where a map image is displayed, also when there are modification of a contraction scale, modification of a display position, etc., processing transmits return, the positional information after modification, contraction scale information, etc. to step S6 to the WWW server 22. Henceforth, the WWW server 22, the map server 12, and Terminal A perform same processing based on the information after modification, and change a map display.

[0039] For example, when a user operates the contraction scale specification part 32 and contraction scale information is changed, the range of the map image data which the map file which the map server 12 should access is changed, or is transmitted to Terminal A among the same map files is changed. On the other hand, if a user clicks the location which is interested on the map displayed in the map display 30, the positional information of the location will be transmitted

and the map server 12 will transmit the map image data centering on the location to Terminal A. Consequently, the map in the map display 30 is changed into a display centering on the location which the user clicked.
[0040] In addition, in the above-mentioned explanation, although the map server 12 specified the map file directly by the file name, the map file of the map server 12 may be made to be built according to original administrative information. In that case, it replaces with specifying a map file name directly, and a map file is accessed using CGI (Common Gateway Interface) which achieves an interface with the program which moves on a WWW server and a server. For example, at step S10, the CGI name for a map display is sent to the map server 12.
[0041] [3] Explain the electronic mail transmitting processing concerning this invention with reference to electronic mail transmitting processing next drawing 5 thru/or 7. Drawing 5 is a flow chart which shows electronic mail transmitting processing. Moreover, drawing 6 and 7 show the example of the e-mail creation screen displayed on a terminal in electronic mail transmitting processing.
[0042] Hereafter, the user A of Terminal A explains to the user B of Terminal B the processing which transmits the electronic mail with map information concerning this invention. Now, User A shall have connected with a map information offer site. Here, User A displays first a map image to transmit to User B with the procedure described previously on Terminal A (step S20). This is performed by the approach explained with reference to the flow chart of drawing 2 . Namely, in the page of the map information offer site displayed on Terminal A, the map information on a desired location is displayed on the map display 30 by inputting an address, a name of the station, etc. Moreover, if required, a suitable contraction scale will be chosen by clicking the carbon button in the contraction scale specification part 32.
[0043] Next, User A clicks the e-mail processing carbon button 38 (step S22). Then, Terminal A sends the positional information (center position of a display), size information, and contraction scale information on the map image by which it is indicated by current to the WWW server 22 which is the link place URL of the HTML text concerned (step S24). The WWW server 22 sends this data to the map server 12 (step S26). With reference to the map database 14, the map server 12 chooses a map file based on contraction scale information, and acquires the map image of the range determined using positional information and size information. And it is sent to the WWW server 22, using this map image as GIF data (step S28). The WWW server 22 attaches a file name (for example, it considers as "Image C".), and saves this map image data.
[0044] Next, the WWW server 22 creates a HTML text including description of the name of the paint program (JAVA applet) used for the file name "image C" of the image data, positional information, contraction scale information, and a list at Terminal A for the hand entry force, and transmits this to Terminal A (step S30).
[0045] Terminal A reads reception and its content for this HTML text transmitted from the WWW server 22. Moreover, the program of the name described there is required of the WWW server 22, and the program concerned is downloaded (step S32).
[0046] Next, Terminal A acquires the file name of map image data, positional information, contraction scale information, etc. from a HTML text, and acquires and displays the map image file from a WWW server. Moreover, the downloaded paint program is started. Consequently, the e-mail creation screen 40 shown on Terminal A at drawing 6 appears (step S34).
[0047] The destination input box 46, the subject name input box 48, and the message input box 50 are expressed on the right-hand side as the e-mail creation screen 40. This is the same as that of the usual e-mail software wear. Therefore, User A inputs a transmitting partner's mail address, a subject name, and a message in these input boxes using a keyboard.
[0048] In addition, in the e-mail creation screen 40, the map image determined previously is displayed in the map display 42. Thereby, User A can check the map image transmitted to a phase hand with an electronic mail in preparation.
[0049] The hand entry force tool 44 is displayed on the bottom of the map display 42. One big description of this invention is that the hand entry force of arbitration is made on the map image transmitted. That is, it not only says that a map image is attached to an electronic mail and it can only transmit to it, but an e-mail transmitting person performs the hand entry force of arbitration on the map image, and it can transmit the map image with which it was superimposed on such hand entry force by E-mail.
[0050] User A does an e-mail creation activity on the e-mail creation screen 40 (step S34). It is assumed that Now A, for example, a user, transmits the electronic mail about queuing with User B. In this case, User A inputs User's B mail address in the destination input box 46, and inputs a subject name and a message into the subject name input box 48 and the message input box 50, respectively. For example, a subject name is made into "3/3 of queuing", and it waits by "3/3 in the message column, and is waiting with OO hamburger of JR Kamata station west entrance at 7:00 p.m. See a map. " is inputted.

[0051] Next, User A uses the hand entry force tool 44, and performs the hand entry force on the map image displayed in the map display 42. That is, as shown in drawing 7 , the route from JR Kamata station to OO hamburger is surrounded by the line, a bond and OO hamburger are surrounded by the line, and it is shown. If the hand entry force is completed, User A will click the transmitting carbon button 52. Thereby, the e-mail document and map information which were created are decided. In addition, the display on Terminal A returns to the Maine screen shown in drawing 4 by clicking a reset button 52 to stop transmission of the case where he wants to respecify a map image, or mail.
[0052] If the transmitting carbon button 52 is pushed, the paint program within Terminal A will be changed into the image data of a GIF format of the map image with which User's A hand entry force was applied. Terminal A transmits data, such as changed map image data, a phase hand mail address inputted into the list, a subject name, and a message, to a WWW server 22 (step S36). The WWW server 22 saves the map image data which received, and sends such e-mail information to a phase hand mail address (step S38).
[0053] User B receives and expresses this mail as Terminal B. The map image data (image in the map display 42 of drawing 7) superimposed on User's A hand entry force is attached to this mail, and User B can see that map image with a message. In this way, a map image including the hand entry force is transmitted as an electronic mail.
[0054] With the above-mentioned operation gestalt, the paint program for an e-mail transmitting person to perform the hand entry force on a map image is downloaded from the WWW server to an e-mail transmitting person's terminal as a JAVA applet. Instead, it is also possible to constitute so that data-ization of the map image after the hand entry force and the hand entry force may be performed using the drawing software beforehand prepared in each terminal. The reason for having used the JAVA applet in this operation gestalt is based on the problem of that the drawing software which has the suitable compatibility for each terminal does not necessarily exist, and a security side etc.
[0055] Thus, according to this invention, the map image which applied a transmitting person's hand entry force can be transmitted to a phase hand as an electronic mail with the usual message etc. Therefore, based on map information, it becomes possible to tell against easy more exact information.

[Translation done.]

* NOTICES *

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block section which shows the rough configuration of the electronic mail system concerning the operation gestalt of this invention.
[Drawing 2] It is the flow chart which shows offer actuation of map information.
[Drawing 3] It is drawing showing the example of the display screen of a map information offer site.
[Drawing 4] They are other drawings showing the example of the display screen of a map information offer site.
[Drawing 5] It is the flow chart which shows transmitting processing of an electronic mail with map information.
[Drawing 6] It is drawing showing the example of an e-mail creation screen.
[Drawing 7] It is drawing showing the example of the e-mail creation screen after the hand entry force.
[Description of Notations]
1 2 -- Terminal
5 -- Internet
10 -- Map database center
12 -- Map server
14 -- Map database
20 -- Map information offer site
22 -- WWW server
24 -- Landmark database
30 42 -- Map display
32 -- Contraction scale specification part
34 -- Scrolling section
36 -- The input column
38 -- E-mail processing carbon button
40 -- E-mail creation screen
44 -- Hand entry force tool
46 -- Destination input box
48 -- Subject name input box
50 -- Message input box
52 -- Transmitting carbon button
54 -- Reset button

[Translation done.]